

Independent claim 17 recites:

A method of reducing phytotoxicity to corn or maize caused by a herbicide application to the corn or maize which method comprises:

(a) applying to the seed of the corn or maize a seed treatment comprising one or more chloronicotinyl insecticides selected from the group consisting of...[markush group of formulas not shown];

and

(b) applying to the corn or maize, its locus, or combinations thereof, a herbicidal composition, wherein the herbicide is selected from the group consisting of chloroacetamides, imidazolinones, oxyacetamides, sulfonylureas, triazines, triketones, isoxazoles, and combinations thereof,

wherein the chloronicotinyl insecticide is applied to the seed at a rate of from 0.05 mg/seed to 3 mg/seed, and

wherein the soil temperature at the locus of the maize or corn at or before the time of application of the herbicide is from about 4°C to about 25°C.

This claimed method results in the advantageous effects of reducing the phytotoxicity of the herbicide on the corn or maize. These effects are clearly demonstrated by the evidence presented in the Examples of the specification. Each of Examples 1A, 1B, and 2A-D demonstrate that those seeds/plants treated with the insecticide and then treated with the herbicide showed less phytotoxicity (stunted growth, less vigorous growth, yellowing, fewer tillers, etc.) than those seeds/plants that were not treated with the insecticide prior to the herbicide. The applied references fail to identify, recognize, or even contemplate the steps of the method or its effects. Instead, the references only show that the individual components were known.

For at least the reasons presented below, the Office Action fails to establish a *prima facie* case of obviousness for claim 17.

A. Turnblad's Deficiencies

Turnblad is asserted as the primary reference to teach adding both an insecticide and an herbicide as recited in the method of claim 17. Admittedly, Turnblad lists an insecticide and an optional herbicide that fall under the scope of claim 17. However, the Office Action fails to establish a reason to (i) select these compounds from the numerous additives disclosed in Turnblad and (ii) to use therein a method as claimed to "[reduce] phytotoxicity to corn or maize caused by a herbicide application."

Turnblad does not suggest the method of claim 17, namely, "reducing phytotoxicity to corn or maize caused by a herbicide application to corn or maize" (emphasis added). Turnblad is instead directed to an insecticidal coating that reduces the phytotoxicity of the insecticide on the seed. *See* Turnblad at col. 1, ll. 21-24. The reduced phytotoxicity in Turnblad is accomplished by the use of a binder that "serves as a matrix for the insecticide and is preferably present in the seed coating in an amount sufficient to prevent or reduce the levels of phytotoxicity caused by the insecticide." *Id.* at col. 2, ll. 55-60. The necessity of the binder is demonstrated in Example 3, where seeds treated without the binder (Treatment 1(b)), but with the insecticide, have reduced seedling growth when compared with seeds treated with the insecticide and binder (Treatment 1(a)). *See id.* at col. 9 and Table 1.

Turnblad also focuses on the criticality of a filler material to protect treated seeds and reduce phytotoxicity during stress conditions. *See id.* at col. 3, ll. 46-49; *see also* Example 4 "Effect on Phytotoxicity of Using Filler in the Coating," col. 9, l. 59-col. 10, l. 14 (where the filler is shown to decrease phytotoxicity).

Thus, while the instant claims allow for binder and filler, Turnblad recognizes a need and components (binder and filler) to protect a seed from an insecticide, but it fails to recognize that

an insecticide can protect a seed or plant from an herbicide, as is accomplished in the method of claim 17. In fact, Turnblad fails to provide any examples where an herbicide is included in the seed coating. Turnblad's merely mentions numerous optional herbicides, none of which are actually tested or tried. There is no suggestion to (a) apply "a seed treatment comprising one or more chloronicotinyl insecticides" and (b) apply "a herbicidal composition" to "[reduce] phytotoxicity to corn or maize caused by a herbicide application to the corn or maize" as claimed.

The Office Action at page 4 recognizes that Turnblad fails to provide any specific teaching exemplifying a claimed insecticide and herbicide being applied to corn or maize, but asserts that Senn and Szczoanski provide the requisite motivation to select the claimed components and apply them as recited in the method of claim 17. Applicant's respectfully disagree.

B. Senn's Deficiencies

Senn does not cure Turnblad's deficiencies. Senn is asserted to teach the advantages of using imidacloprid and/or thiamethoxam. Admittedly, imidacloprid and thiamethoxam are known compounds with particular advantages over some compounds. However, these advantages fail to establish a reason to select and use the compounds described in Senn, combine them with the optional herbicides of Turnblad, and use them in a method as claimed. Senn fails to recognize or identify the shielding effect ("reducing phytotoxicity") of these compounds when applied with an herbicide. Indeed, Senn does not even address herbicides. As such, Senn fails to provide any reason for one of skill in the art to select one of the claimed insecticides AND herbicides and use them as claimed.

C. Szczoanski's Deficiencies

Similarly, Szczoanski does not cure the deficiencies of Turnblad and Senn. Szczoanski is asserted to teach the advantages of triazines for protecting maize plants from the harmful effects of chloroacetamides. Such a teaching fails to teach or suggest that triazines or chloroacetamides, both of which are recited in claim 17, should be selected from the numerous categories of optional herbicides mentioned in Turnblad and applied along with an insecticide as recited in steps (a) and (b) of claim 17.

D. No Prima Facie Case

The Office Action alleges that claim 17 is obvious because one of skill in the art would have (1) determined that an optional herbicide should and can be effectively used, despite the fact that no examples are provided where such an active ingredient is used, (2) selected one of the insecticidal compounds of claim 17, none of which are identified in the prior art as being able to reduce phytotoxicity resulting from herbicides, and (3) selected one of the herbicidal compositions of claim 17 and applied it along with the insecticidal compound, in the absence of any suggestion that the selected insecticidal composition would decrease phytotoxicity with an herbicidal composition known to have some positive but unrelated attributes. Such a line of reasoning is insufficient to support a *prima facie* case of obviousness. Instead, it is merely a picking and choosing of claim features from multiple references. At least because the Office Action fails to set forth a legitimate rationale for selecting the claimed insecticide and herbicide recited in claim 17, a *prima facie* case of obviousness has not been established.

Claim 17 would not have been rendered obvious by the combination of Turnblad, Senn, and Szczoanski. Claims 18-22 depend from claim 17 and, thus, also would not have been

rendered obvious by the applied references. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection.

II. Conclusion

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. Applicants earnestly solicit favorable reconsideration and prompt allowance of the application.

Should the Examiner believe that anything further would be desirable to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below. Applicants authorize the Commissioner to charge Deposit Account No. 50-4254, referencing Attorney Docket No. 2912939-002000 for fees due or any deficiencies of fees and to credit any overpayments.

Respectfully submitted,

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